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SEQUENCE LISTING

<110> Schnable, Patrick S.
Liu, Feng
Fu, Yan

<120> NUCLEIC ACID MOLECULES ENCODING MULTIPLE
START CODONS AND HISTIDINE TAGS

<130> 08411-027001

<140> US 09/897,776
<141> 2001-06-29

<150> US 09/732,990
<151> 2000-12-08

<150> US 60/169,725
<151> 1999-12-08

<160> 37

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Lys Leu His His His His His Ala Ser Pro Pro Pro Pro Arg Ile
1 5 10 15 48

atc atc acc atc acc tcg agc gtc aca cta gct gag taa gca tgc
Ile Ile Thr Ile Thr Ser Ser Val Thr Leu Ala Glu Ala Cys
20 25 30 93

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gtacccacca ccatcatcat cacgcacac caccaccacc acgcacatc atcaccatca	60
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agcttgatat ctgcag	16
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ccatcgatcc gagatagggt tgagt	25

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acgagcttag gcagagacga

20

<210> 9
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<400> 9
acgagctcgc agagacgacg

20

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cctcgagtca cacaggaaac agctaa

26

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ggcttagcagc tgtttcctgt gtga

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gtggagcatc tggtcgca

18

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accacc		66
<210> 16		
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tgtatgca		67
<210> 17		
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tttaagaagg agatatacat atggcatggc atggcca		97

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<400> 18
 atggcatggc atg 13

<210> 19
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<400> 19
 aattgtctcc ctatagtgag tcgttattaat ttcgg 35

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<220>
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<400> 20
 Lys Leu His His His His His Ala Ser Pro Pro Pro Pro Arg Ile
 1 5 10 15
 Ile Ile Thr Ile Thr Ser Ser Val Thr Leu Ala Glu
 20 25

<210> 21
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 Ser Phe Thr Thr Ile Ile Ile Thr His His His His His Ala Ser
 1 5 10 15

tca tca cca tca cct cga gcg tca cac tag ctg agt aag cat 91
 Ser Ser Pro Ser Pro Arg Ala Ser His Leu Ser Lys His

20

25

93

gc

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<212> PRT
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<220>
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Ser Phe Thr Thr Ile Ile Thr His His His His His Ala Ser
1 5 10 15
Ser Ser Pro Ser Pro Arg Ala Ser His
20 25

<210> 23
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<220>
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<400> 23
Leu Ser Lys His
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<210> 24
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<220>
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<221> CDS
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<400> 24
aa gct tca cca cca tca tca cgc atc acc acc acc acc acg cat 47
Ala Ser Pro Pro Ser Ser Arg Ile Thr Thr Thr Thr His
1 5 10 15

cat cat cac cat cac ctc gag cgt cac act agc tga gta agc atg
His His His His His Leu Glu Arg His Thr Ser Val Ser Met
20 25

C

93

<210> 25
<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 25

Ala Ser Pro Pro Ser Ser Ser Arg Ile Thr Thr Thr Thr Thr His His	15		
1	5	10	15
His His His His Leu Glu Arg His Thr Ser			
20	25		

<210> 26

<211> 93

<212> DNA

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<220>

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<400> 26

gcatgcttac tcagctagtg tgacgctcga ggtgatggtg atgatgatgc gtgggtgggg	60
tggatcgcg tggatgtat ggtggtaagg ctt	93

<210> 27

<211> 118

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<220>

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<221> CDS

<222> (1) ... (99)

<221> CDS

<222> (103) ... (117)

<400> 27

tat aca tat ggc atg gca tgg cca ctg cag gat cca cca cca tca tca	48		
Tyr Thr Tyr Gly Met Ala Trp Pro Leu Gln Asp Pro Pro Pro Ser Ser			
1	5	10	15

tca cgc atc acc acc acc acc ata ggc cat cat cat cac cat cac act	96	
Ser Arg Ile Thr Thr Thr Ile Gly His His His His His His Thr		
20	25	30

agc tga gta agc atg cga cgt c	118
Ser Val Ser Met Arg Arg	
35	

<210> 28

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 28

Tyr	Thr	Tyr	Gly	Met	Ala	Trp	Pro	Leu	Gln	Asp	Pro	Pro	Ser	Ser
1				5				10			15			
Ser	Arg	Ile	Thr	Thr	Thr	Thr	Ile	Gly	His	His	His	His	His	Thr
		20					25				30			

Ser

<210> 29

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 29

Val	Ser	Met	Arg	Arg
1		5		

<210> 30

<211> 118

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<222> (2)...(70)

<221> CDS

<222> (74)...(103)

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<222> (107)...(118)

<400> 30

t	ata	cat	atg	gca	tgg	cat	ggc	cac	tgc	agg	atc	cac	cac	cat	cat	cat	cat	cat
																		49
Ile	His	Met	Ala	Trp	His	Gly	His	Cys	Arg	Ile	His	His	His	His	His			
1				5						10				15				

cac	gca	tca	cca	cca	cca	tag	gcc	atc	atc	atc	acc	atc	aca	cta			97
His	Ala	Ser	Pro	Pro	Pro		Ala	Ile	Ile	Ile	Thr	Ile	Thr	Leu			
							20		25		30						

gct	gag	taa	gca	tgc	gac	gtc											118
Ala	Glu		Ala	Cys	Asp	Val											
							35										

<210> 31

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 31

Ile	His	Met	Ala	Trp	His	Gly	His	Cys	Arg	Ile	His	His	His	His	His
1					5				10						15
His	Ala	Ser	Pro	Pro	Pro	Pro									
			20												

<210> 32

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 32

Ala	Ile	Ile	Ile	Thr	Ile	Thr	Leu	Ala	Glu
1				5					10

<210> 33

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 33

Ala Cys Asp Val

<210> 34

<211> 118

<212> DNA

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<221> CDS

<222> (3)...(95)

<221> CDS

<222> (99)...(116)

<400> 34

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Tyr	Ile	Trp	His	Gly	Met	Ala	Thr	Ala	Gly	Ser	Thr	Thr	Ile	Ile	
1					5				10						15

atc	acg	cat	cac	cac	cac	cat	agg	cca	tca	tca	cca	tca	cac		
Ile	Thr	His	His	His	His	His	Arg	Pro	Ser	Ser	Pro	Ser	His		
								20	25		30				

tag ctg agt aag cat gcg acg tc
Leu Ser Lys His Ala Thr

35

47

95

118

<210> 35
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated peptide

<400> 35
Tyr Ile Trp His Gly Met Ala Thr Ala Gly Ser Thr Thr Ile Ile Ile
1 5 10 15
Thr His His His His His Arg Pro Ser Ser Ser Pro Ser His
20 25 30

<210> 36
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated peptide

<400> 36
Leu Ser Lys His Ala Thr
1 5

<210> 37
<211> 118
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated oligonucleotide

<400> 37
gacgtcgcat gcttactcag ctagtgtgat ggtgatgatg atggcctatg gtgggtgg 60
tgatgcgtga ttagtggatcct gcagtggcca tgccatgccata tatgtata 118